

V. *The moths of Burma.* Part I. By Colonel CHARLES SWINHOE, F.L.S., F.Z.S., &c.

[Read February 5th, 1890.]

PLATE VI.

THIS paper is the first attempt yet made at a comprehensive list of the moths of the Burman region. Mr. Moore has recorded two or three lists of Lepidoptera from Tenasserim and Mergui containing some moths; and Mr. Butler has also recorded a few moths from Moulmein. In Mr. Walker's catalogue of the moths of the British Museum there are but three references to Burma; but Mr. Butler advised me to examine the register of the moths from Archdeacon Clerk's collection in the museum, and there we find that all the moths recorded in Walker's catalogue as from the East Indies, and from Hindustan, from Archdeacon Clerk's collection, are from Moulmein; and amongst them are no less than 93 of Walker's types.

Before leaving India I had the opportunity of going over the collections of moths of the Indian Museum, Calcutta, and of the Phayre Museum, Rangoon, and took many notes concerning Burman moths; and through the great kindness of Mr. Noble, the Curator of the Phayre Museum, I have received for examination a large series of Burman moths, carefully labelled with localities and dates, and have thus been enabled to record a list containing 662 species, including 7 new genera, and 107 new species.

I have to thank Lord Walsingham, who has kindly identified some of the *Tineina*, and has been so good as to describe a new species of *Grapholitha* for this paper; and I have also to thank Mr. Warren for giving me for publication his MS. descriptions of 4 new genera of *Pyrales*, and 4 new species represented in my Burman collection. The types of all the new species will, as usual, be presented to the British Museum.

SPHINGES.

SPHINGIDÆ.

MACROGLOSSINÆ.

1. *Hemaris hylas*.

Sphinx hylas, Linn., Mant., i., p. 539 (1771).

Sphinx picus, Cram., Pap. Exot. ii., pl. 148, & B (1777).

Macroglossa kingi, McLeay, King's 'Survey of Australia,' App., p. 465 (1827).

Sesia cunninghami, Walker, viii., p. 85 (1856).

Moulmein. In B. M.

2. *Macroglossa luteata*.

Macroglossa luteata, Butler, P. Z. S., 1875, p. 241, pl. 37, f. 5.

Tenasserim. In I. M., Calcutta.

3. *Macroglossa obscura*.

Macroglossa obscura, Butler, P. Z. S., 1875, p. 5, pl. 1, f. 2.

Upper Tenasserim. In B. M.

4. *Macroglossa proxima*.

Macroglossa proxima, Butler, P. Z. S., 1875, p. 4, pl. 1, f. 1.

Moulmein. In B. M.

5. *Macroglossa orientalis*.

Macroglossa orientalis, Butler, T. Z. S., ix., p. 528 (1876).
Moulmein (type). In B. M.

Tenasserim. In I. M., Calcutta.

CHÆROCAMPINÆ.

6. *Acosmeryx pseudonaga*.

Acosmeryx pseudonaga, Butler, Ill. Typ. Lep. Het. B. M., v., p. 2, pl. 88, f. 3 (1881).

Bassein, August, 1888. In Phayre Museum, Rangoon.

7. *Pergesa acteus*.

Sphinx acteus, Cram., Pap. Exot., iii., pl. 248, f. A. (1779).

Moulmein. In B. M.
Rangoon, September, 1886. In coll. Swinhoe.

8. *Panacra busiris*.

Panacra busiris, Walker, viii., p. 158 (1856).
Rangoon. In Phayre Museum, Rangoon.

9. *Panacra automedon*.

Deilephila automedon, ♀, Boisd., M. S.
Panacra automedon, Walker, viii., p. 154, ♀ (1856).
Panacra truncata, Walker, viii., p. 160, ♂.
Pegu. In Phayre Museum, Rangoon.

10. *Panacra vigil*.

Sphinx vigil, Guérin, Deless. Voy. dans l'Inde, pt. 2, p.
80, pl. 23, f. 1 (1843).
Sphinx phœnyx, Herr.-Schff., Aust. Europ. Schm., pl.
83, f. 478 (1858).
Rangoon and Mandalay. In coll. Swinhoe.

11. *Chærocampa elegans*.

Chærocampa elegans, Butler, P. Z. S., 1875, p. 8, pl.
2, f. 1.
Bassein, August, 1888. In Phayre Museum, Rangoon.
Rangoon, October, 1888. In coll. Swinhoe.

12. *Chærocampa rafflesii*.

Chærocampa rafflesii, Butler, T. Z. S., ix., p. 556 (1876).
Mandalay. In coll. Swinhoe.

13. *Chærocampa oldenlandiæ*.

Sphinx oldenlandiæ, Fabr., Sp. Ins., ii., p. 148 (1781).
Xylophanes gortys, Hübn., Samml. Exot. Schm. Zutr.,
figs. 513, 514 (1816).
Thyetmyo. In Phayre Museum, Rangoon.

14. *Chærocampa silhetensis*.

Deilephila silhetensis, Boisd., M. S.
Chærocampa silhetensis, Walker, viii., p. 143 (1856).
Xylophanes pinastrina, Moore, Lep. Ceylon, ii., p. 18,
pl. 87, f. 2 (1882).
Pegu. In Phayre Museum, Rangoon.

15. *Chærocampa lucasii*.

Deilephila lucasii, Boisd., M. S.

Chærocampa lucasii, Walker, viii., p. 141 (1856).

Rangoon, December, 1886. In coll. Swinhoe.

16. *Chærocampa clotho*.

Sphinx clotho, Drury, Ill. Exot. Ins., ii., p. 48, pl. 28,
f. 1 (1773).

Sphinx batus, var., Fabr., Ent. Syst., iii., p. 377 (1793).

Moulmein. In B. M.

Mandalay. In coll. Swinhoe.

17. *Chærocampa nessus*.

Sphinx nessus, Drury, Ill. Exot. Ins., ii., p. 46, pl. 27, f. 1
(1773).

Sphinx equestris, Fabr., Ent. Syst., iii., p. 365 (1793).

Chærocampa rubicundus, Schaufuss, Nunquam Otiosus,
i., p. 18 (1870).

Moulmein. In B. M.

AMBULICINÆ.

18. *Ambulyx substrigillis*.

Sphinx (Ambulyx) substrigillis, Westw., Cab. Or. Ent.,
p. 61, pl. 30, f. 2 (1848).

Tao (Tenasserim). In I. M., Calcutta.

SMERINTHINÆ.

19. *Cypa decolor*.

Smerinthus decolor, Walker, viii., p. 255 (1856).

Cypa incongruens, Butler, Ill. Typ. Lep. Het., B. M., v.,
p. 12, pl. 80, f. 8 & 9 (1881).

Tavoy. In I. M., Calcutta.

The type, which is from Darjiling, is in coll. Saunders.

20. *Daphnusa ocellaris*.

Daphnusa ocellaris, Walker, viii., p. 238 (1856).

Bassein, August, 1888, in coll. Swinhoe.

Borneo (Type). In B. M., but my specimen is identical.

ACHERONTINÆ.

21. *Acherontia morta*.

Acherontia morta, Hübn., Verz. Bek. Schm., p. 140
(1816).

Moulmein. In B. M.

SPHINGINÆ.

22. *Protoparce orientalis*.

Protoparce orientalis, Butler, T. Z. S., ix., p. 609, pl. 91, f. 16 & 17 (1876).

Mandalay and Rangoon, March, 1887. In coll. Swinhoe. Moulmein. In B. M.

23. *Diludia vates*.

Diludia vates, Butler, P. Z. S., 1875, p. 13.

Sphinx abietina, Boisd., Hist. Nat. Ins. Sphing., p. 108 (1875).

Moulmein. In B. M.

24. *Calymnia panopus*.

Sphinx panopus, Cram., Pap. Exot., iii., p. 50, pl. 224, figs. A, B (1779).

Rangoon. In coll. Swinhoe.

25. *Nephele hespera*.

Sphinx hespera, Fabr., Syst. Ent., 546, 33 (1775).

Sphinx chiron, Cram., Pap. Exot., ii., pl. 137, f. E (1777).

Sphinx didyma, Fabr., Sp. Ins., ii., 148, 41 (1781).

Sphinx quaterna, Charpentier, Ed. Espers. Aus. Schm. Sph., pl. 1, f. 2 (1830).

Perigonia obliterans, Walker, xxxi., p. 28 (1864).

Mandalay. In coll. Swinhoe.

BOMBYCES.

ÆGERIDÆ.

26. *Ægeria rangoonensis*, n. sp.

Antennæ black, not clavate, slightly falcate, setose beneath, the setæ in patches, palpi bright ochreous, nearly curved, rising a little higher than the head, thickly clothed, brownish at the sides, third joint very short. Eyes black. Top of head and body dark brown, nearly black, with greenish and bronzy tints in certain lights; two bands on the collar, first pale ochreous, second shining dark green; with ochreous stripes on the body, one on each side, and one behind on the thorax, and one on each segment in the abdomen, the middle one indistinct; anal tuft dark greenish black, long and thick. Wings hyaline, tinged with yellow, bands purplish brown, altogether paler than the colour of the body. Fore wing, with

some ochreous marks at the base; a costal band limited by the subcostal vein; a band in the hinder margin slightly thinner than the costal band; a thicker band across end of cell, from the lower end of which it runs sharply forward to the hinder margin near the angle making a sharp inward angle; and an outer marginal band, thickest of all, which deepens upwards, and its inside margin curves on to the costa. Hind wing with a thin band at the end of the cell, a thin costal band and marginal line; fringe on both wings black; wings below paler, more yellowish. Face and pectus pale whitish yellow, with the ochreous bands on each side of the thorax above reaching over on to each side of the pectus. Body dark greenish brown; abdomen with an ochreous central stripe interrupted on the segments. Legs stout, purplish black, edged with glistening greyish white on the inner sides; fore legs with a pale whitish yellow band at the basal joint of the femora; a broad penicillate fringe on the tibiæ, and the tarsi white; middle and hind legs with long reddish tufts on the tibiæ; their tarsi with white bands; middle tibiæ with one long and one short spur at the end; hind tibiæ with two pairs of spurs, one very long and one very short, from the same root, and some very long whitish hairs; all the long spurs brownish, and the short ones white. Expanse of wings, $1\frac{2}{10}$ — $1\frac{3}{10}$ inch. Length of body to tips of anal tuft, $1\frac{1}{10}$ — $1\frac{1}{2}$ inch.

Rangoon, June and July, 1888. In coll. Swinhoe.

Allied to *Ægeria spheciformis*, Schiff., from the Amur, wings yellower, bands thinner, and body differently banded.

27. *Sciapteron noblei*, n. sp.

Antennæ smooth, ochreous, edged with black at the base, not clavate, slightly falcate. Palpi curved, rising as high as the top of the head, stout, bright ochreous, brown at the sides towards the tips. Eyes black. Head and body shining blue-black; a pale yellowish ring on the collar, and another dark bluish black marked with grey behind it. A golden spot on the fore part of each tegula, some bronzy shades on the thorax and abdomen. Fore wings well clothed and deep purplish black without markings. Hind wings hyaline, with black margins, black veins, and a black band closing the cell; fringe on both wings pale black, much paler than the colour of the fore wings below, wings as above but duller. Proboscis bright ochreous. Body and legs deep shining blue-black. Some long grey hairs on the sides of the abdomen near the base; a large yellow spot in the centre of thorax near the base, and two or three faint yellow spots down the centre of the abdomen. Fore tarsi yellow; middle

femora with a reddish tuft of hairs; middle and hind tarsi with yellowish bands and marks; middle tibiæ with a long and a short spur at the end; hind tibiæ with two long and two shorter spurs (about half the length), one long and one short from each root. Anal tuft long, thick, bright blue-black above and below, and with a bright orange spot below; all the long spurs are brownish, and the short ones white.

The female is of the same general description but of an altogether duller colour, inclining to bronzy greenish. Expanse of wings, $1\frac{5}{10}$ inch. Length of the body to tips of anal tuft, $\frac{9}{10}$ inch.

Rangoon, July and August, 1888. In coll. Swinhoe.

Allied to *S. regale*, Butler, from Japan; differs in the colour of the wings and antennæ, being black and yellow instead of brown and black, and in the body being differently marked.

28. *Sciapteron jucunda*, n. sp.

♂. Palpi pure ochreous, curved, rising as high as the top of the head, well clothed, third joint short. Antennæ ochreous brown, smooth, slightly falcate. Eyes black. Top of head and body dark greenish brown; a band on the collar in front greyish, with a bluish band behind it; a dark ochreous band on each side of the neck. Thorax and abdomen unmarked, except for some crimson marks on the sides of the abdomen near the tip; anal tuft long, thick, and deep crimson. Fore wings more rounded at the tips than in *S. noblei*, well clothed, and of a bronzy brown, with purplish reflections. Hind wings hyaline, veins brown, a brown band closing the cell, outer margin brown, fringe on both wings of the same colour. Under side, wings duller. Body blue black; a yellow patch in the centre of the thorax near the base, and a yellow spot on each segment of the abdomen. Legs blue-black, less clothed than in *S. noblei*; fore tarsi yellow; middle tibiæ with a long and a short spur together at the end, and with a crimson tuft; middle tarsi yellowish on the lower portions; hind tibiæ with two sets of spurs, a long and short one to each set, and with two crimson tufts of hair above; hind tarsi grey with whitish marks; all the long spurs brownish, and the short ones white. Expanse of wings, $1\frac{1}{10}$ inch. Length of body to tip of anal tuft, $1\frac{1}{2}$ inch.

Rangoon, June and July, 1888. In coll. Swinhoe.

Differs chiefly from the preceding species by its bright crimson anal tuft.

29. *Sciapteron gracilis*, n. sp.

♂ ♀. Antennæ ochreous, smooth, slightly falcate. Palpi ochreous, clothed, curved, rising as high as top of the head; third joint short. Eyes brown; two yellow bands behind the eyes. Thorax bronzy, with an ochreous curved band behind. Abdomen greenish black, with two ochreous bands, one on first and one on third segment; anal tuft light ochreous red. Fore wings clothed, and of a pale reddish yellow colour. Hind wings hyaline, with veins, marginal line and band closing end of the cell, pale reddish yellow; fringe on both wings blackish brown. Below, wings same as above, but with a golden tinge. Body greenish black; collar and spots down the centre of the thorax and abdomen, reddish ochreous. Fore legs greenish black, streaked with reddish ochreous, and with the tarsi entirely of that colour; middle and hind femora greenish black, with the remaining portion of the legs reddish ochreous; spurs on the middle and hind legs as in *S. jucunda*, but also reddish ochreous. Expanse of wings, $1\frac{3}{10}$ inch. Length of body to tip of anal tuft, $1\frac{1}{10}$ inch.

Rangoon, July, 1888. In coll. Swinhoe.

Differs from *S. jucunda* in its general reddish coloration, and in its yellow bands on abdomen.

30. *Melittia notabilis*, n. sp. (Pl. VI., fig. 1).

Antennæ black, reddish brown at the tips, stout, slightly clavate, falcate. Palpi brown, covered with white hairs, stout, curved, rising as high as the vertex, last joint very short. Eyes reddish brown. Head, collar, thorax, and first two segments of abdomen (which is very stout), brownish, luteous; remainder of the abdomen dark greenish black, with pale yellowish white thin bands on each segment; anal tuft short, composed of black and white hairs. Wings hyaline, with the veins and fringe reddish brown, and all the bands of that colour. Fore wings with a broad band on the costa, a thinner one on the hinder margin, a band across the wing at the end of the cell, and a broad outer band leaving the hyaline space between attenuated at the upper end; median vein prominent, and thickly covered with scales. Hind wings with only the marginal lines, otherwise it is unmarked. Under side, pectus and face and half the abdomen, a pale chrome yellow; remainder of the body black, with a broad chrome yellow band down the centre to the anal tuft, which is also covered with this colour. Fore and middle legs with yellow and black stripes; a tuft of yellow hairs at the base of the middle femora; the middle tibiæ covered with long hairs; hind legs densely clothed

with long hairs, which continue to the end of the tarsi, and are deep black, with one small and two large yellow patches; one set of spurs on middle tibiæ, and two sets on hind tibiæ, each set composed of a long and a short one. Expanse of wings, $1\frac{6}{10}$ inch. Length of body to tip of anal tuft, $\frac{9}{10}$ inch.

Rangoon, August, 1887. In coll. Swinhoe.

Nearest allied to *M. chalciformis*, Fab., as identified in the British Museum; but is a much stouter insect, and is differently coloured in the body.

31. *Melittia plecta*, n. sp. (Pl. VI., fig. 2).

Antennæ black, stout, slightly clavate, falcate. Palpi brown, covered with white hairs, stout, curved, rising as high as the vertex, last joint short. Eyes and top of head brown, collar and thorax luteous, tinged with reddish. Abdomen black, the segments marked with white; anal tuft black, short. Fore wings nearly completely clothed, deep black, a thin hyaline line below the cell, from the base nearly to the end of the cell; a short hyaline streak near the end of the cell, and another beyond it, also a small indistinct semi-hyaline streak near the apex, all longitudinal. Hind wings hyaline, veins and marginal lines black; fringe of both wings pale black; under side, wings same as above, but the hind wing in certain lights has a glistening blue tinge. Body and legs black. Face white. Abdomen with a whitish stripe down its centre. Thorax with some white marks. Legs clothed as in *M. notabilis*; fore legs with white stripes; hind legs with a few of the long hairs with white tips, and with some faint blue marks on the tibiæ; one set of spurs on middle tibiæ, and two sets on hind tibiæ, each set composed of a long and a short spur. Expanse of wings, $1\frac{1}{2}$ inch. Length of the body to tip of anal tuft, $\frac{8}{9}$ inch.

Rangoon, August, 1888. In coll. Swinhoe.

Differs from *M. notabilis* in narrow wings and body, and in its blacker coloration.

32. *Melittia congruens*, n. sp. (Pl. VI., fig. 4).

Antennæ reddish, thin, smooth, clavate, falcate, much like the antennæ of a Hesperid. Palpi reddish, first joints thickly clothed with white hairs; second joint thinly clothed with white hairs with brown tips; last joint naked, rather long, half the length of the second. Eyes with the frontal half bronzy, and the hinder half deep black, the two colours quite distinct and well defined. Head, collar, and body, bronzy; some golden hairs at the sides of the

thorax near the base. Abdomen with the sides and anal portions dark greenish black; anal tuft deep black. Wings hyaline, with pale purplish brown veins and bands. Fore wings with a costal band, a thinner band on hinder margin, a band across the wing at the end of the cell, and a broad marginal band, circling on its inner side from the hinder angle round to the costa at one-eighth from the apex. Hind wings with only the marginal lines; fringe on both wings pale purplish brown. Underside wings as above, with a golden tinge. Face and collar white. Thorax pale purplish brown, with pale luteous marks. Abdomen and anal tuft chrome yellow, with black sides. Legs pale purplish brown, with luteous streaks; spurs as in *M. pellecta*, but all of them unusually stout and long; middle tibiæ with some brown and luteous hairs on the lower half; hind tibiæ densely clothed with long reddish hairs; hind tarsi with long black hairs, with a white patch. Expanse of wings, $1\frac{2}{10}$ inch. Length of body to tip of anal tuft, $\frac{8}{10}$ inch.

Rangoon, July, 1888. In coll. Swinhoe.

Its peculiar antennæ and length of spurs separates it from any other species known to me.

33. *Melittia ? volatilis*, n. sp. (Pl. VI., fig. 3).

Antennæ black, reddish at the tips, thin, clavate, falcate. Palpi black, clothed with white hairs, curved, rising as high as the vertex; third joint small. Eyes half bronze and half black, as in *M. congruens*. Collar black. Thorax metallic, lilac purple, body greenish black, the segments edged with pure white; anal tuft black. Fore wings black, round at the tips, almost entirely clothed, except for a hyaline streak below the cell, another along the outer half of the cell, and a small spot towards the hinder angle, in a line with the lower streak. Hind wings hyaline; veins and marginal lines black, and a slight black thickening on the upper half of the vein closing the cell, and some glistening pale cerulean blue scales at the base, where there is a tuft of hairs of the same colour; under side wings as above, but with a glistening blue tint. Face white. Thorax and abdomen black, some white marks on the former. Legs black, with white stripes; middle tibiæ sparsely clothed with short black bristles; hind tibiæ, with longish black hairs, with two white spots, and with white tips to some of the hairs; spurs, as in *M. pellecta*, but slender, and the short ones very slender and short. Expanse of wings, 1 inch. Length of the body to tip of anal tuft, $\frac{6}{10}$ inch.

Rangoon, August, 1888. In coll. Swinhoe.

Allied to nothing that I know of; is sub-generically distinct from any other species of this family known to me.

34. *Melittia eurytion*.

Trochilium eurytion, Westw., Cab. Or. Ent., p. 62, pl. 30, f. 5 (1848).

Rangoon. In coll. Swinhoe.

35. *Pramila minuta*, n. sp. (Pl. VI., fig. 5).

Antennæ brown. Palpi flesh colour, white below, brownish at the tips, slender, curved, rising higher than the head; last joint long, two thirds length of the second. Eyes black; band behind greyish white. Body dark olive green. A pure white spot on each side of the thorax at base of fore wings. Abdomen with grey and green bands, two or three of them edged with pure white; anal tuft composed of white and brown hairs. Fore wing with all the veins deep black, the cell and lower interspace hyaline; costa and hinder margin black; and this colour prevails in the whole space beyond the cell, which is closed by a black line and another parallel line just beyond it, the space between these lines being chrome yellow; and outside the outer black line is a fine line composed of hyaline spaces between the veins, running almost up to the apex. Hind wings hyaline, veins, outer lines, and a band closing the cell, black; fringe on both wings black; below, wings as above, but with a glistening purplish golden tinge. Body and legs black. Thorax with white marks. Abdomen with white bands on each segment. Tibiæ and tarsi with broad white bands; one set of spurs in middle and two sets in hind tibiæ, each set composed of two long and one short one. Expanse of wings, $\frac{2}{10}$ inch. Length of body to tip of anal tuft, $\frac{1}{2}$ inch.

Rangoon, June, 1888. In coll. Swinhoe.

I do not know what this insect's nearest described ally is, the neuration on both wings is quite different to the *Sciapteron* above described, and so are the spurs in the legs. I put it provisionally in the genus *Pramila*, to which it is nearest allied.

SYNTOMIDÆ.

36. *Euchromia orientalis*.

Euchromia orientalis, Butler, Journ. Linn. Soc. Lond., 1876, p. 364.

Rangoon, December, 1886. In coll. Swinhoe.

37. *Euchromia fraterna*.

Euchromia fraterna, Butler, Journ. Linn. Soc., Lond.,
1876, p. 364.

(Type). Moulmein. In B. M.

38. *Phauda flammans*.

Euchromia (Phauda) flammans, Walker, i., p. 257 (1854).
Bassein, October, 1887. In coll. Swinhoe.

39. *Artona fulvida*.

Artona fulvida, Butler, Journ. Linn. Soc., Lond.,
1876, p. 356.

(Type). Moulmein. In B. M.

40. *Artona nigrescens*.

Artona nigrescens, Butler, Journ. Linn. Soc., Lond.,
1876, p. 356.

Rangoon, October, 1888. In coll. Swinhoe.

41. *Syntomis albifrons*.

Syntomis albifrons, Moore, P. Z. S., 1878, p. 845, pl.
53, f. 6.

Tenasserim. In coll. Moore.

42. *Syntomis atkinsoni*.

Syntomis atkinsoni, Moore, P. Z. S., 1871, p. 245,
pl. 18, f. 2.

Mergui, Rangoon, July, 1888. In coll. Swinhoe.

Tenasserim. In I. M., Calcutta.

Moulmein and Tenasserim. In B. M.

43. *Syntomis berinda*.

Syntomis berinda, Moore, P. Z. S., 1878, p. 845, pl.
53, f. 8.

Tenasserim. In coll. Moore.

44. *Syntomis disrupta*.

Syntomis disrupta, Moore, P. Z. S., 1878, p. 845, pl.
53, f. 5.

Tenasserim. In I. M., Calcutta.

45. *Syntomis fervida*.

Syntomis fervida, Walker, i., p. 131 (1854).

Moulmein. In B. M.

46. *Syntomis grotei*.

Syntomis grotei, Moore, P. Z. S., 1871, p. 245, pl. 18, f. 4.

Tenasserim. In I. M., Calcutta.

47. *Syntomis libera*.

Syntomis libera, Walker, xxxi., p. 78 (1864).

Upper Tenasserim. In I. M., Calcutta.

48. *Syntomis masoni*.

Syntomis masoni, Moore, P. Z. S., 1878, p. 845, pl. 53, f. 4.

Tenasserim. In I. M., Calcutta.

49. *Syntomis sladeni*.

Syntomis sladeni, Moore, P. Z. S., 1871, p. 245, pl. 18, f. 5.

Tenasserim. In coll. Moore.

50. *Syntomis pectoralis*.

Syntomis pectoralis, Walker, i., p. 133 (1854).

(Type). Moulmein. In B. M.

51. *Syntomis volans*, n. sp. (Pl. VI., fig. 6).

Antennæ, palpi, head, and body black. Abdomen with a broad golden ring encircling each segment. Wings hyaline; fore wing broad, long; hind wing very small; wings quite uncoloured; veins black; costal and marginal lines black, thickest on hind border, and all round the hind wing; marginal line on both wings slightly dentated inwards on the veins. Tip of fore wings with a black patch, and the hyaline part on the costa towards the base visible between it and the subcostal vein. Underside black. Legs black. Expanse of wings, $1\frac{2}{10}$ inch.

Karen Hills, April, 1887. In coll. Swinhoe.

Looks superficially somewhat like *Hydrusa discinota*, Moore, but is differently marked, and the neuration is different, the two radial veins on the fore wing being well separated as in the genus *Syntomis*, and not close together as in that sub-genus.

52. *Notioptera properta*.

Notioptera properta, Swinhoe, P. Z. S., 1889, p. 400,
pl. 43, f. 6.

Rangoon, June, 1886 and 1888. In coll. Swinhoe.

AGARISTIDÆ.

53. *Eusemia albomarginata*.

Eusemia albomarginata, Moore, P. Z. S., 1872, p. 569.
Rangoon. In coll. Swinhoe.

54. *Eusemia adulatrix*.

Eusemia adulatrix, Kollar, Hüg. Kasch., iv., p. 464,
pl. 20, f. 1 (1846).

Eusemia bellatrix, Westw., Cab. Or. Ent., p. 67. pl. 33,
f. 2 (1848).

Moulmein. In B. M.

Pegu, June. Rangoon, May, 1886, in coll. Swinhoe.

55. *Eusemia communis*.

Eusemia communis, Butler, Ann. Mag. N. H., 4, xv., p.
140, pl. 13, f. 1 (1875).

Rangoon, May, 1886. In coll. Swinhoe.

56. *Eusemia vulcania*.

Eusemia vulcania, Butler, Ent. Mo. Mag., Lond., xii.,
p. 123 (1875).

Prome, May, 1887. In coll. Swinhoe.

57. *Eusemia accurata*.

Eusemia accurata, Swinhoe, P. Z. S., 1889, p. 401.

Moulmein, June, 1888. In coll. Swinhoe.

58. *Ægocera tripartita*.

Ægocera tripartita, Kirby, Proc. Roy. Dublin Soc. (2),
ii., p. 340 (1880).

Thyetmyo, October and November, 1887, in coll.
Swinhoe.

59. *Seudyra dissimilis*, n. sp.

Fore wings reddish chocolate brown, costal and inner portions
irrorated with grey; some slender transverse lines and the
median vein grey; two large grey rings, the first round, above and
just before termination of median vein; the other larger, oblique,

and bent in at the sides, a broad white discal band from costa one-third from apex to hinder margin. Hind wing luteous, with a broad blackish brown band sinuous on its inner margin. Thorax chocolate brown. Abdomen luteous, with a dorsal row of brown marks. Expanse of wings, $1\frac{1}{2}$ inch.

Mandalay. In coll. Swinhoe.

Allied to *S. transiens*, Walker, but smaller, and can easily be distinguished by the absence of the two white discal lines beyond the white discal band, and in having no brown cell spot on the hind wings.

CHALCOSIIDÆ.

60. *Trypanophora humeralis*.

Syntomis humeralis, Walker, vii., p. 1593 (1856).

Tavoy. In I. M., Calcutta.

61. *Heterusia distincta*.

Gynautocera distincta, Guérin, Voy. Deless. Nat. Hist., p. 85, pl. 24, f. 3 (1843).

Mergui. In I. M., Calcutta.

62. *Soritia pulchella*.

Chalcosia pulchella, Kollar, Hüg. Kasch., p. 461 (1848).

Moulmein. In B. M.

63. *Pintia drataraja*.

Eterusia drataraja, Moore, Cat. Lep. E. I. C., ii., p. 321, pl. 8 a. f. 3 (1859)

Mergui. In I. M., Calcutta.

64. *Pintia cyanea*.

Pintia cyanea, Butler, Ann. Mag. N. H. (5), xii., p. 160 (1883).

Mergui. In I. M., Calcutta.

65. *Epyrgis binghami*.

Epyrgis binghami, Butler, Ann. Nat. Hist. (5), x., p. 374 (1882).

Tenasserim. In B. M.

66. *Epyrgis imitans*.

Epyrgis imitans, Butler, Ill. Typ. Lep. Het., v., p. 24,
pl. 84, f. 1 (1881).

Karen Hills, April, 1887. In coll. Swinhoe.

67. *Epyrgis papilionaris*.

Phalæna papilionaris, Drury, Ins. Exot., ii., p. 4, pl. 2,
f. 4 (1773).

Phalæna venaria, Fabr., Ent. Syst., iii., 2, 156, 96
(1794).

Moulmein. In B. M.

Mergui. In coll. Swinhoe.

68. *Epyrgis parvula*.

Epyrgis parvula, Butler, Ann. Mag. N. H. (5), xii., p.
160 (1883).

Burma. In coll. Swinhoe.

69. *Cyclosia panthona*.

Phalæna panthona, Cram., Pap. Exot., iv., pl. 322, f.
C (1780).

Moulmein. In B. M.

Mergui. In coll. Swinhoe.

70. *Laurion gemina*.

Laurion gemina, Walker, ii., p. 427 (1854).

Mergui. In I. M., Calcutta.

71. *Codane zelica*.

Gynautocera (Chalcosia) zelica, Doubleday, Ann. Mag.
N. H. (1), xix., p. 76, pl. 7, f. 3 (1847).

Moulmein. In B. M.

72. *Codane zenotea*.

Pidorus zenotea, Doubleday, M. S., Walker, ii., p. 425
(1854).

Karen Hills, April, 1887. In coll. Swinhoe.

Moulmein, in B. M.

73. *Codane neoterica*, n. sp.

Antennæ, head, and fore part of thorax dark green; remainder of thorax and abdomen golden yellow. Wings pure white, bands pale chocolate-brown. Fore wings, with a thin band on the costa, thickest in the basal half; a broad central band, its outer margin nearly erect, its inner margin sinuous and widening upwards on to the costa; a broad outer band, its inner margin extending from the hinder margin near the hinder angle to the costa, one third from the apex, and slightly circling towards the apex in its centre; in this margin are two large white subapical spots one below the other; a larger submarginal central white spot and some white median veinlets; also a broad grey shade on the basal half of the hinder margin. Hind wings with a thin central band, a broad marginal band, which fines down and abruptly terminates at one third from the anal angle. Below as above, but the central band on the fore wings is broken into a patch from the costa and a spot below it. Body and legs golden yellow; legs with brown stripes. Abdomen with a row of brown spots on each side. Expanse of wings, $2\frac{1}{10}$ inch.

Rangoon, 1887. In coll. Swinhoe.

Allied to *C. leucomelas*, Moore; differs in the broader central band, thus leaving a much narrower area between it and the outer border, which is also broader at the hinder angle. In the hind wing it differs in not having the white apical spot.

74. *Scaptosyle tricolor*.

Scaptosyle tricolor, Walker, ii., p. 378 (1854).

Burma. In coll. Swinhoe.

75. *Thymara caudata*.

Thymara caudata, Moore, P. Z. S., 1879, p. 394, pl. 32, f. 3.

Burma. In coll. Moore.

76. *Histia cometaris*.

Histia cometaris, Butler, Ann. Mag. N. H. (5), x. p. 374 (1882).

Tenasserim. In B. M.

77. *Gynautocera papilionaria*.

Gynautocera papilionaria, Guérin, Mag. Zool., 1830,
p. 12.

Bassein, October, 1887. In coll. Swinhoe.

78. *Pompon velentula*.

Pompon velentula, Swinhoe, P. Z. S., 1889, p. 401.

Burma. In coll. Swinhoe.

NYCTEMERIDÆ.

79. *Nyctemera coleta*.

Phalæna coleta, Cram., Pap. Exot., iv., pl. 368, f. H.
(1781).

Rangoon, October, 1888. In coll. Swinhoe.

80. *Nyctemera lacticingea*.

Phalæna (Geometra) lacticingea, Cram. Pap. Exot., ii.,
pl. 128, f. E (1777).

Burma. In B. M.

81. *Nyctemera latistriga*.

Nyctemera latistriga, Walker, ii., p. 397 (1854).

Bassein, October, 1887; Rangoon, October, 1888.

Hypongadon, October, 1886. In coll. Swinhoe.

Moulmein. In B. M.

82. *Nyctemera tripunctaria*.

Phalæna tripunctaria, Linn., Mus. Lud. Ulr., p. 392
(1764).

Nyctemera atralba, Hübn., Verz. Bek. Schmett., p. 170
(1816).

Tavoy. In I. M., Calcutta.

83. *Pitasila moolaica*.

Pitasila moolaica, Moore, P. Z. S., 1878, p. 847, pl. 53,
f. 10.

Tenasserim. In I. M., Calcutta.

84. *Pitasila varians*.

Nyctemera varians, Walker, ii., p. 400 (1854).

Rangoon, April and August, 1886; Karen Hills, April, 1887. In coll. Swinhoe.

85. *Pterothysanus noblei*.

Pterothysanus noblei, Swinhoe, P. Z. S., 1889, p. 401, pl. 44, fig. 3.

Prome, May, 1887. In coll. Swinhoe.

CALLIDULIDÆ.

86. *Datanga minor*.

Datanga minor, Moore, Descr. Ind. Lep. Atk., i., p. 21 (1879).

Moulmein. In coll. Moore.

LITHOSIIDÆ.

HYP SINÆ.

87. *Peridrome orbicularis*.

Hypsa (Peridrome) orbicularis, Walker, ii., p. 445 (1854).
Aganopsis subquadrata, Herr.-Schäff., Lep. Sp. Nov., p. 70 (1856).

Rangoon, April, May and August, 1886. In coll. Swinhoe.

Tenasserim. In I. M., Calcutta.

(Type). Moulmein. In B. M.

88. *Anagina subfascia*.

Hypsa (Anagina) subfascia, Walker, ii., p. 446 (1854).

Moulmein. In B. M.

Tenasserim, Tavoy. In coll. Moore.

Rangoon, March, April & May, 1886. In coll. Swinhoe.

89. *Euplocia membliaria*.

Phalena membliaria, Cram., Pap. Exot., iii., pl. 269, figs. C, D (1780).

(Type). Moulmein. In B. M.

90. *Neochera marmorea*.

Hypsa (*Neochera*) *marmorea*, ♀, Walker, vii., p. 1674 (1856).

Neochera bhawana, ♂, Moore, Cat. Lep. E. I. C., ii. p. 295, pl. 7, f. 4, (1859).

Moulmein. In B. M.

Pegu, July; Rangoon, April, May, September and October, 1885-6. In coll. Swinhoe.

91. *Hypsa heliconia*.

Phalæna heliconia, ♂, Linn., Syst. Nat., x., p. 511 (1758).

P. monycha, ♀, Cram., Pap. Exot., ii., pl. 131, f. C (1777).

Hypsa doryca, Walker, ii., p. 459 (1854).

Moulmein, in B. M.

Rangoon, October, 1886 and 1888; Bassein, October, 1887. In coll. Swinhoe.

92. *Hypsa persecta*.

Hypsa persecta, Butler, Trans. Ent. Soc. Lond., 1875, p. 317.

H. lacteata, Butler, Ill. Typ. Lep. Het. B. M., v., p. 43, pl. 87, f. 9 (1881).

Rangoon, October, 1888. In coll. Swinhoe.

93. *Hypsa subsimilis*.

Hypsa subsimilis, Walker, xxxi., p. 212 (1864).

Tenasserim. In I. M., Calcutta.

94. *Hypsa venalba*.

Hypsa venalba, Moore, P. Z. S., 1877, p. 598.

Upper Tenasserim, August. In coll. Swinhoe.

95. *Damalis alcifron*.

Phalæna alcifron, Cram. Pap. Exot. ii., pl. 133, f. E (1777).

Noctua carice, Fabr., Ent. Syst., iii., 2, p. 27, 63 (1794).

Moulmein, in B. M.

Rangoon, May and August 1886, October, 1888. In coll. Swinhoe.

96. *Damalis egens*.

Hypsa (Damalis) egens, Walker, ii., p. 453 (1854)
Moulmein, in B. M.
Rangoon, January, 1887. In coll. Swinhoe.

97. *Damalis javana*.

Phalena javana, Cram., Pap. Exot., iii., pl. 274, f. C
(1780).
Moulmein. In B. M.

98. *Damalis plaginota*.

Hypsa plaginota, Butler, Trans. Ent. Soc. Lond.,
1875, p. 320.
Tenasserim. In I. M., Calcutta.

99. *Damalis strigivenata*.

Damalis strigivenata, Butler, Trans. Ent. Soc. Lond.,
1875, p. 321.
Tavoy. In I. M., Calcutta.

100. *Philona cinerascens*.

Hypsa (Philona) cinerascens, Moore, P. Z. S., 1877, p.
598, pl. 59, f. 6.
Upper Tenasserim, August. In coll. Swinhoe.

101. *Digama figurata*.

Digama figurata, Moore, P. Z. S., 1878, p. 5.
(Type). Burma. In coll. Moore.

LITHOSIINÆ.

102. *Macrobrochis leucospilota*.

Macrobrochis leucospilota, Moore, P. Z. S., 1878, p. 8.
Rangoon, June, 1886. In coll. Swinhoe.

103. *Æonistis entella*.

Phalena entella, Cram., Pap. Exot., iii., pl. 208, f. D
(1779).
Tenasserim. In coll. Moore.

104. *Lyclene humilis*.

Cyllene humilis, Walker, ii., p. 544 (1854).
Moulmein. In B. M.

105. *Nepita frigida*.

Doliche frigida, Walker, ii., p. 530 (1854).
Moulmein. In B. M.

106. *Nudaria dasara*.

Setina dasara, Moore, Cat. Lep. E. I. C., ii. p. 303 (1859).
Rangoon, September, 1888. In coll. Swinhoe.

107. *Sesapa undulosa*.

Cyllene undulosa, Walker, ii., p. 545 (1854).
Moulmein. In B. M.

108. *Barsine coccinea*.

Barsine coccinea, Moore, Journ. As. Soc. Beng., iv.,
(2), i., p. 98 (1886).
Tavoy. In I. M., Calcutta.

109. *Bizone bianca*.

Bizone bianca, Walker, vii., p. 1684 (1856).
Rangoon, May, 1886. In coll. Swinhoe.

110. *Bizone pallens*.

Bizone pallens, Butler, Trans. Ent. Soc. London, 1877,
p. 338.
Moulmein. In B. M.

111. *Bizone peregrina*.

Bizone peregrina, Walker, ii., p. 551 (1854).
Moulmein. In B. M.

112. *Tatargyna picta*.

Deiopeia picta, Walker, xxxi., p. 263 (1864).
(Type). Moulmein. In B. M.
Prome, May, 1887. In coll. Swinhoe.

113. *Argina cribraria*.

Phalæna cribraria, Clerck, Icon. Inns., ii., pl. 54, f. 4, (1759—64).

P. (Noctua) astrea, Drury, Ill., ii., p. 11, pl. 6, f. 3 (1773).

Bombyx pylotis, Fabr., Syst. Ent., p. 585 (1775).

Argina notata, Butler, Trans. Ent. Soc. Lond., 1877, p. 365.

Mergui. In I. M., Calcutta.

114. *Argina dulcis*.

Deiopeia dulcis, Walker, ii., p. 569 (1854).

Argina guttata, Rambur, Faune de l'Andalousie, ii., p. 229 (1866).

Moulmein. In B. M.

115. *Argina pardalina*.

Deiopeia pardalina, Walker, xxxi., p. 263 (1864).

Moulmein. In B. M.

116. *Deiopeia thyter*.

Deiopeia thyter, Butler, Trans. Ent. Soc. Lond., 1877, p. 361.

Burma. In B. M.

117. *Hemonia dulcicula*, n. sp.

Antennæ, head, and front of thorax, bright chrome yellow; a broad band of the same colour extending from the base along the costa and outer border of the fore wings to the hinder angle, where it suddenly becomes narrow; remainder of the thorax and of the fore wings dark pinkish purple. Abdomen and hind wings of the same tone of colour but much paler, and with the outer portions of the hind wings yellowish, broadly so at the apex. Below, fore wings paler; hind wings, body and legs, yellowish. Expanse of wings, $\frac{5}{10}$ — $\frac{6}{10}$ inch.

Rangoon, May, 1888. In coll. Swinhoe.

Easily distinguishable from *H. orbiferana*, Walker, by its well-defined yellow border on costa and outer margin of fore wings, and by its much smaller size.

118. *Pseudoblabe oophora*.

Pseudoblabe oophora, Zeller, Bull. Soc. I. N. Mosc.,
1853, p. 514, pl. 4, f. 1—6.

Rangoon. In coll. Moore.

119. *Raselia fragilis*, n. sp.

White. Body and fore wings sparsely covered with black irrora-
tions. Fore wings with the entire costa marked with pale black
marks; an ante-medial black band, which fines downwards from
the costa, and stops about two thirds the breadth of the wing; a
post-medial broad black band, with slightly sinuous borders, the
inner border being in the middle of the wing; and a submarginal
sinuous pale black line, which curves inwards on to the costa.
Fringe pale black. Hind wings pure white, unmarked. Under
side grey, shining; medial band on fore wings showing through.
Body and legs brownish. Expanse of wings, $4\frac{1}{2}$ -10ths inch.

Rangoon, August, 1888. In coll. Swinhoe.

Allied to *Raselia pascua*, Swinhoe, but from which it
can at once be distinguished by its broad black band on
fore wings, which occupies one-fifth of the space of the
wing.

ARCTIIDÆ.

120. *Spilarctia rubescens*.

Spilosoma rubescens, Walker, iii., p. 677 (1855).

Moulmein. In B. M.

121. *Spilarctia ummera*.

Spilarctia ummera, Swinhoe, P. Z. S., 1889, p. 405,
pl. 43, fig. 1.

Bassein, October, 1887. In coll. Swinhoe.

122. *Phissama transiens*.

Spilosoma transiens, ♀, Walker, iii., p. 675 (1855).

Amphissa vacillans, ♂, Walker, iii., p. 685.

Aloa isabellina, Walker, iii., p. 705.

Moulmein. In B. M.

Rangoon. In coll. Swinhoe.

It is impossible to separate the above, the types look
distinct enough; but I have intermediates of many
shades of colour and difference in markings from the
same localities.

123. *Cretonotos interrupta*.

Phalæna interrupta, Linn., Syst. Nat. Phal., i., v., p. 2553.

Bombyx francisca, Fabr., Mant. Ins., ii., p. 131 (1787).

Moulmein. In B. M.

Rangoon, May, June and July, 1886. In coll. Swinhoe.

124. *Rajendra tripartita*.

Aloa tripartita, Walker, iii., p. 706 (1855).

Moulmein. In B. M.

Rangoon, August and September, 1886. In coll. Swinhoe.

125. *Rajendra vittata*.

Rajendra vittata, Moore, P. Z. S., 1879, p. 396, pl. 32, f. 12.

(Type). Lower Burma. In coll. Moore.

126. *Tinolius zingha*, n. sp. (Pl. VI., fig. 12).

Palpi, antennæ, head, thorax, and fore wings, ochreous brown; antennæ nearly as long as the abdomen. Abdomen pinkish ochreous, bright crimson down the centre, but is somewhat rubbed. Fore wings ochreous fawn colour, tinged with pinkish; with one large white spot within the cell in the centre, and another at the end of the cell outside, where the median branches are emitted. Hind wings paler and pinkish towards the base and abdominal margins. Underside, both wings of a uniform pale ochreous grey, tinged with pinkish and quite unmarked. Expanse of wings, $2\frac{1}{10}$ inch.

Beeling, April, 1886. In coll. Swinhoe.

Allied to *T. eburneigutta*, Walker, but differs in its paler coloration; inordinately long antennæ, and has only two spots on the fore wing, whereas *T. eburneigutta* has three large ones in the centre, and two on the hinder margin.

127. *Tinolius eburneigutta*.

Tinolius eburneigutta, Walker, iii., p. 621 (1855).

Rangoon, April, July and September, 1888. In coll. Swinhoe.

128. *Hypercompa principalis*.

Euprepia principalis, Kollar, Hüg. Kasch., iv., p. 465, pl. 20, f. 2 (1848).

Pegu. In coll. Swinhoe.

129. *Attatha regalis*.

Hypercompa regalis, Moore, P. Z. S., 1872, p. 575, pl. 33, f. 7.

Meetan. In coll. Moore.

130. *Aloa insolata*.

Aloa insolata, Swinhoe, P. Z. S., 1889, p. 404, pl. 43, fig. 15.

Thyetmyo, September, 1887. In coll. Swinhoe.

131. *Aloa lactinea*.

Phalæna lactinea, Cram., Pap. Exot., ii., pl. 133, f. D (1777).

Bombyx sanguinolenta, Fabr., Ent. Syst., iii., 473, 206 (1793).

Rangoon, May, 1886. In coll. Swinhoe.

LIPARIDÆ.

132. *Orgyia postica*.

Lacida postica, Walker, iv., p. 803 (1855).

Moulmein. In B. M.

133. *Lælioides rubripennis*.

Lælioides rubripennis, Moore, Trans. Ent. Soc. Lond., 1884, p. 358.

(Type) Burma. In coll. B. M.

134. *Lælia angulifera*.

Prorodeca angulifera, Walker, iv., p. 919 (1855).

(Type). Moulmein. In B. M.

Mergui. In I. M., Calcutta.

135. *Genusa bigutta*.

Genusa bigutta, Walker, iv., p. 818 (1855).

Moulmein. In B. M.

136. *Genusa terminata*.

Genusa terminata, Walker, xxxii., p. 340 (1864).

Karen Hills, April, 1887; Beeling, March, 1888. In coll. Swinhoe.

137. *Artaxa atomaria*.

Artaxa atomaria, Walker, iv., p. 796 (1855).
(Type). Moulmein. In B. M.

138. *Artaxa digramma*.

Bombyx digramma, Boisd., Icon. R. Anim. Ins., p. 508,
pl. 86, f. 4 (1829-38).
Moulmein. In B. M.

139. *Artaxa flavinata*.

Artaxa flavinata, Walker, xxxii., p. 331 (1865).
Moulmein. In B. M.

140. *Artaxa pusilla*.

Artaxa pusilla, Moore, Lep. Ceylon, ii., p. 86, pl. 112,
f. 4 (1882).
Rangoon, May, 1887. In coll. Swinhoe.

141. *Artaxa varians*.

Artaxa varians, Walker, iii., p. 796 (1855).
Moulmein. In B. M.
Mergui. In I. M., Calcutta.

142. *Somena subnotata*.

Orvasca subnotata, Walker, xxxii., p. 502 (1865).
Rangoon. In Phayre Museum, Rangoon.

143. *Porthesia virguncula*.

Euproctis virguncula, Walker, iv., p. 836 (1855).
Moulmein. In B. M.

144. *Porthesia marginalis*.

Euproctis marginalis, Walker, vii., p. 1731 (1856).
Mergui. In I. M., Calcutta.

145. *Euproctis atomaria*.

Euproctis atomaria, Walker, iv., p. 837 (1855).
Mergui. In I. M., Calcutta.

146. *Euproctis bigutta*.

Euproctis bigutta, Walker, iv., p. 837 (1855).

Mergui. In I. M., Calcutta.

147. *Euproctis immaculata*.

Euproctis immaculata, Moore, Trans. Ent. Soc. Lond., 1884, p. 358.

Rangoon, October, 1886. In coll. Swinhoe.

148. *Chærotricha plana*.

Euproctis plana, Walker, vii., p. 1731 (1856).

Hpongalaoo, June, 1886. In coll. Swinhoe.

149. *Chærotricha varia*.

Euproctis varia, Walker, iv., p. 840 (1855).

Mergui. In I. M., Calcutta.

150. *Procodeca angulifera*.

Prorodeca angulifera, Walker, iv., p. 919 (1855).

(Type). Moulmein. In B. M.

Mergui. In I. M. Calcutta.

151. *Lymantria asoetria*.

Lymantria asoetria, Hübn., Samml. Exot. Schm., 2, figs. (1—4).

Moulmein. In B. M.

Tavoy. In I. M., Calcutta.

152. *Patana dispar*.

Patana dispar, Walker, iv., p. 820 (1855).

(Type). Moulmein. In B. M.

Tongloo; Rangoon, October, 1886. In coll. Swinhoe.

153. *Numenes siletti*.

Numenes siletti, Walker, iii., p. 663 (1855).

N. insignis, Moore, Cat. Lep. E. I. C., ii., p. 367, pl. x., a, f. 6 (1859).

Tavoy. In I. M., Calcutta.

Rangoon, December, 1885. In coll. Swinhoe.

NOTODONTIDÆ.

DICRANURINÆ.

154. *Stauropus indicus*.

Stauropus indicus, Moore, P. Z. S., 1879, p. 404.

Rangoon, November, 1886. In coll. Swinhoe.

PHALERINÆ.

155. *Ramesa tosta*.

Ramesa tosta, Walker, v., 1017 (1855).

Pyentaza, April, 1888. In coll. Swinhoe.

156. *Hyperæschra annulata*, n. sp. (Pl. VI., fig. 15).

♀. Pinkish grey; palpi brown at the sides, last joint with the upper part brown with pale tips. Fore wings shaded with brown on the upper, lower, and outer parts, and with pink in the disc; some brownish longitudinal streaks in the centre, and some deep black short subapical streaks connected with a blackish shade straight across the wing towards the centre of the hinder margin; two short brown subcostal central streaks, two curved and distorted brown lines edged with paler colour across the wing, ante-medial and post-medial, and between them two large brown rings edged outwardly with paler colour, the outer the larger, and anterior ring the size of the first, outside the outer line, all three rings nearly in a line, the outermost one with a pinkish centre; a submarginal sinuous pale line, a marginal brown line with a pale inner edge; cilia with brown patches and a central pale line. Hind wings brownish, paling in the costa; cilia pale yellowish grey, with a brown interlined patch at the anal angle. Abdomen grey. Expanse of wings, $1\frac{1}{2}$ in.

Thyetmyo, October, 1887. In coll. Swinhoe.

Differs much from *H. pallida*, Butler, the only other described Indian species of this genus, in its smaller size, rounded apex, and ring-marks on fore wings.

NOTODONTINÆ.

157. *Anthea servula*.

Phalæna servula, Drury, Ins. Exot., ii., p. 20, pl. 11, f. 4 (1773).

Anthea discalis, Walker, iii., p. 767 (1855).

A. exanthemata, Moore, Lep. Ceylon, ii., p. 111, pl. 119,
f. 2 (not pl. 104), (1882).

Rangoon, July, 1888. In coll. Swinhoe.

Mr. Moore has pointed out to me the fact that Drury's figure of *P. servula* is undoubtedly the same as Walker's *A. discalis*, a common insect in the East.

158. *Thiacidas postica*.

Thiacidas postica, Walker, v., p. 1028 (1855).

Thyetmyo, 1887. In coll. Swinhoe.

159. *Cleapa latifascia*.

Cleapa latifascia, Walker, v., p. 1037 (1855).

(Type). Moulmein. In B. M.

160. *Bireta longivitta*.

Bireta longivitta, Walker, vii., p. 1754 (1856).

Rangoon. In Phayre Museum, Rangoon.

CALPINÆ.

161. *Oræsia emarginata*.

Noctua emarginata, Fabr., Ent. Syst., iii., 2, 82, 240
(1794).

Oræsia alliciens, Walker, xii., p. 944 (1857).

O. tentans, Walker, *l. c.*

Rangoon, November, 1888. In coll. Swinhoe.

DREPANULIDÆ.

162. *Drepana argenteola*.

Drepana argenteola, Moore, Cat. Lep. E. I. C., ii.,
p. 369 (1859).

Rangoon, August, 1886. In coll. Swinhoe.

163. *Oreta extensa*.

Oreta extensa, Walker, v., p. 1166 (1855).

(Type). Moulmein. In B. M.

164. *Oreta vatama*.

Oreta vatama, Moore, P. Z. S., 1865, p. 816.

Pegu. In coll. Swinhoe.

165. *Somatina anthophilata*.

Somatina anthophilata, Guén., Phal., ii., 11, 907,
pl. 18, f. 2 (1857).

Moulmein. In B. M.

Rangoon, July and November, 1888. In coll. Swinhoe.

166. *Problepsis deliaria*.

Argyris deliaria, Walker, xxiii., p. 808 (1861).

Moulmein. In B. M.

LIMACODIDÆ.

167. *Scopelodes testacea*.

Scopelodes testacea, Butler, Ill. Typ. Lep. Het. B. M.,
vi., p. 3, pl. 101, f. 5 (1886).

Moulmein. In B. M.

168. *Natada rufescens*.

Natada rufescens, Walker, v., p. 1109 (1855).

Rangoon, May, 1886. In coll. Swinhoe.

169. *Thosea rara*.

Thosea rara, Swinhoe, P. Z. S., 1889, p. 408, pl. 43,
fig. 9.

Thyetmyo, October, 1887. In coll. Swinhoe.

170. *Thosea unifascia*.

Thosea unifascia, Walker, v., p. 1068 (1855).

(Type). Moulmein. In B. M.

Bhamo, October, 1882; Rangoon, August and October,
1886. In coll. Swinhoe.

171. *Parasa bandura*.

Parasa bandura, Moore, Cat. Lep. E. I. C., ii., p. 417,
pl. 11a, f. 9 (1859).

Rangoon, 1886 and 1887. In coll. Swinhoe.

172. *Parasa bicolor*.

Neera bicolor, Walker, v., p. 1142 (1855).

Moulmein. In B. M.

Bassein, August, 1888. In Phayre Museum, Rangoon.
Rangoon, September, 1886. In coll. Swinhoe.

173. *Parasa dharmā*.

Parasa dharmā, Moore, Cat. Lep. E. I. C., ii., p. 414,
pl. 11a, f. 7 (1859).

Rangoon. In coll. Swinhoe.

174. *Parasa mirza*, n. sp. (Pl. VI., fig. 14).

♀. Antennæ and palpi reddish brown. Thorax grass-green; top of head and sides of thorax pale greyish yellow. Fore wings chocolate-colour, with a broad grass-green band across the middle, with both borders slightly curved into the band in their centres. Abdomen and hind wings greyish yellow; under side yellowish, unmarked. Fore wings palest. Legs with some brown stripes. Expanse of wings, $1\frac{1}{10}$ in.

Thyetmyo, 1887. In coll. Swinhoe.

Nearest to *P. hilaris*, Westwood; chiefly differs in the much narrower green band of the fore wings, the outer border of which is also differently shaped.

175. *Susica pallida*.

Susica pallida, Walker, v., p. 1114 (1855).

(Type). Moulmein. In B. M.

176. *Susica? cepphica*, n. sp.

♂. Pinkish brown. Antennæ, palpi, head, and thorax dark brown; antennæ pectinated with short bristles to the tips. Fore wings pale pinkish brown, suffused with dark brown in parts, especially towards the base, costa, and outer margins, forming

bands in the two latter, a submarginal sinuous brown line limiting the marginal band; an ear-shaped large greyish mark in the disc, margined with brown, a similar mark on the hinder margin in its centre. Abdomen and hind wings more brownish; hind wings unmarked; abdomen paler towards the base; under side pale brown, unmarked.

♀. Of a similar character; antennæ also with similar pectinations; the ear-shaped marks on the fore wing are, however, hardly visible and often absent, the brown suffusion more uniform, and the general coloration varying, some being much darker than others. Expanse of wings, $\frac{7}{10}$ in.

Bhamo, October, 1882; Rangoon, July and August, 1888. In coll. Swinhoe.

I do not know where to put this insect; it is nearest allied to *Susica*, but really does not belong to this genus, and I know of no near allies.

177. *Narosa lacteola*, n. sp.

♂. Milky white; palpi at the sides and antennæ pale reddish ochreous; abdomen at the sides and tips lightly tinged with that colour. Fore wings with a minute black dot at the lower end of cell, and another in the margin below the apex; six transverse indistinct and incomplete pale reddish ochreous bands, the basal one the darkest, and paling towards the margin. Hind wings slightly tinged with the same colour, unmarked; under side with the fore and middle legs and central margin of fore wings tinged with pale reddish ochreous. Expanse of wings, $\frac{9}{10}$ in.

Rangoon, October, 1888. In coll. Swinhoe.

Differs from *N. adala*, Moore, its nearest ally, in having the reddish ochreous bands dispersed transversely, instead of obliquely from the base to the costa. In *N. adala* they are also composed of more distinct patches, and the black submarginal dots on hind wings in *N. adala* are absent.

PRONECA, n. g.

Fore wing narrow, elongated, apex rounded, cell extending to half the length of the wing; three subcostals, first emitted near end of cell, second at nearly its length beyond the cell; two radials; lower median emitted at nearly one-fourth before end of cell. Hind wing short, somewhat quadrate in shape; cell fully

half its length; two subcostals from a footstalk beyond end of cell, radial from middle of disco-cellular, two upper medians in a footstalk beyond end of the cell; submedian and internal veins straight. Thorax robust. Abdomen extending beyond hind wings; palpi porrect; first and second joints stout, flattened along their upper edge, and covered with short lax coarse scales, first joint extending half its length beyond the head, second joint as long as the first; third joint slender, squamous, nearly as long as second. Antennæ bipectinated, the branches decreasing in length to two-thirds the tip, the branches finely ciliated. Legs rather long, slender, squamous.

178. *Proneca fola*, n. sp. (Pl. VI., fig. 8).

Palpi and antennæ pale pinkish grey; palpi brown at the sides and base. Thorax pale purplish brown, with a pale pinkish grey broad band in front and at the sides. Fore wing pale pinkish grey, diffused with pale purplish brown on the costal and lower marginal portions; a broad brown band outwardly limited by a blackish line from the centre of the inner margin to the outer margin below the apex, the band getting broader inwardly; an indistinct sinuous brown line between the band and the outer margin. Hind wing and abdomen brownish grey, unmarked. Expanse of wings, $\frac{9}{10}$ in.

Thyetmyo, November, 1887, In coll. Swinhoe.

179. *Limacodes inferna*, n. sp.

♂. Pinkish grey; body and wings covered with brown atoms, making the insect of two or three shades of colour in parts. Antennæ simple. Fore wings with three brown outwardly curved bands, more or less broken, well separated; first before the middle, fairly complete, but not quite touching the costa; second just beyond the middle, and not rising higher than the end of the cell; third sub-submarginal, from hinder angle to costa one-third from apex; a small longitudinal brown streak in the centre near the base. Hind wings unmarked, whitish towards the base; under side paler, costal space on fore wings and central space on hind wings suffused with brown, otherwise unmarked. Expanse of wings, $\frac{8}{10}$ in.

Rangoon, Bhamo; October, 1882. In coll. Swinhoe.

Somewhat resembles *Merisa propexa*, Swinh., but has three curved bands in fore wing instead of two nearly straight ones, and they are also very differently placed.

180. *Setora neutra*, n. sp.

♂. Antennæ pale reddish brown; palpi brown, with pale tips. Head, collar, and fore part of thorax bright golden yellow. Body and fore wings dark bright golden brown. Abdomen with a large yellow spot at the base and a large golden patch before the anal tuft. Fore wings with a black straight ante-medial band inclining outwards, a submarginal bidentate line inwardly broadly margined with gold-colour, a brown mark at the end of the cell, and hinder marginal border brown. Hind wings pale pinkish brown; fringe of both wings pinkish grey; fringe long at hinder angle of fore wings and anal angle of hind wings, and deep black. Under side: Body and legs pinkish brown; wings pale pinkish brown, unmarked. Expanse of wings, 1 in.

Rangoon, May, 1886. In coll. Swinhoe.

Distinguishable from *Setora divergens*, Moore, by its golden front and differently dispersed bands.

181. *Miresa fumifera*, n. sp. (Pl. VI., fig. 13).

♂. Palpi ochreous. Antennæ, body, and wings pale brownish black. Fore wings with a very large deep black spot near the hinder margin in its centre, at the inner upper end of this spot is a suffused pink spot, and a pure white elongated spot with its lower end dividing the upper part of the black and pink spots; under side as above; wings yellowish at the apex and outer borders; legs with ochreous tarsi with thin brown bands. Expanse of wings, $\frac{9}{10}$ in.

Rangoon, 1887. In coll. Swinhoe.

Allied to nothing I know of.

182. *Cania? minutissima*, n. sp. (Pl. VI., fig. 11).

Antennæ of an enormous size, as long as the whole body, heavily pectinated to the tips; pectinations of unusual length, shaft luteous; pectinations dark pinkish grey. Thorax and fore wings luteous, covered with pink atoms; costal line pinkish grey, and a straight upright discal line of a similar colour; ante-medial, from the hinder margin near the angle to the costa, one-third from the apex; a fine marginal line and fringe pinkish. Abdomen and hind wings white, a grey marginal line to the latter and a very long white fringe; under side luteous; middle and hind tibiæ clothed with long hairs, and very long spurs in pairs of equal lengths, one pair

in the middle, and two pairs on the hind tibiæ. Expanse of wings, $\frac{1}{2}$ in.

Rangoon, August, 1888. In coll. Swinhoe.

Allied to nothing I know of, nearest to *Cania*; is very curious little insect belonging to this family.

183. *Cheromettia ferruginea*.

Belippa ferruginea, Moore, Ann. Mag. N. H. (4), xx., p. 348 (1877).

Rangoon; Bhamo, October, 1882. In coll. Swinhoe.

LASIOCAMPIDÆ.

184. *Eupterote tavoensis*.

Eupterote tavoensis, Moore, P. Z. S., 1878, p. 848, pl. 53, f. 7.

(Type). Tenasserim. In I. M., Calcutta.

185. *Lenodora semihyalina*, n. sp. (Pl. VI., figs. 10 & 16).

♂. Reddish brown. Wings darker than the body; wings with a semihyaline patch in their centres, caused by the minuteness of the scales in those portions; the patch on the fore wing occupies nearly the whole central portion of the wing, and runs in towards the base and apex and hinder angle, and the patch in the hind wing occupies the upper outer portion of the wing; the wings look just as if they had been pinched with the fingers, but the insect is perfect and in first-rate condition, and all the patches are exactly uniform, and are undoubtedly natural, and are the same above and below; under side slightly paler than the upper side; the insect is otherwise quite unmarked above and below.

♀. Pale pinkish grey. Antennæ brown. Body and wings of the same uniform colour above and below. Wings sparsely clothed all over, and with faint indications of the same hyaline patches of the male. Expanse of wings, ♂ $1\frac{6}{10}$, ♀ $1\frac{0}{10}$ in.

♂, Rangoon, 1886; ♀, Bassein, September, 1888. In coll. Swinhoe.

Much the same shape and colour in both sexes as *L. costalis*, Walker, but is easily distinguishable by the absence of the longitudinal whitish streak in fore wings, and by its semihyaline wing-centres.

186. *Gastropacha modulata*, n. sp. (Pl. VI., fig. 18).

♂. Brownish red, with a pinkish tinge; pectinations of antennæ blackish brown. Fore wings with an indistinct medial thin brown band, which curves round the end of the cell on to the costa, and an indication of another similar ante-medial band; marginal portion of the wing broadly but lightly suffused with brown. Hind wings unmarked; under side suffused with brown; hinder margin of fore wings palest. Expanse of wings, 2 in.

Bhamo, October, 1882. In coll. Swinhoe.

Allied to *G. terrida*, Moore, but differs in colour and in the absence of the whitish spot at the end of the cell, and the bands on the hind wings.

187. *Trabala vishnu*.

Gastropacha vishnu, Lefebvre, Zool. Journ., iii., p. 207 (1827).

Amydona basalis, Walker, vi., p. 1394 (1855).

A. prasina, Walker, vi., p. 1417.

Moulmein. In B. M.

Mandalay. In coll. Swinhoe.

188. *Trabala irrorata*.

Trabala irrorata, Moore, Trans. Ent. Soc. Lond., 1884, p. 375.

(Type). Mergui. Tavoy, December. In I. M., Calcutta.

189. *Estigena nandina*.

Estigena nandina, Moore, Cat. Lep. E. I. C., ii., p. 427 (1859).

Gastropacha abstracta, Walker, xxxii., p. 551 (1865).

Lebeda scriptiphaga, Walker, xxxii., p. 569.

Mergui. In I. M., Calcutta.

SATURNIIDÆ.

190. *Attæus atlas*.

Phalena atlas, Linn., Mus. Lud. Ulr., p. 366 (1764).

Rangoon. In coll. Swinhoe.

191. *Loepa sikkima*.

Loepa sikkima, Moore, P. Z. S., 1865, p. 818.

Burma. In Phayre Museum, Rangoon.

192. *Cricula burmana*, n. sp.

Marked similarly to *C. trifenestrata*, and of about the same size, but of a dull reddish brown colour. I have a long series of both sexes, and they are all of the same tone of colour, not one of them having the bright yellowish red colour of *C. trifenestrata*. The cocoon also is very different; the cocoon of *C. trifenestrata*, which is well known, is in a network, full of punctures and transparent, so that the chrysalis in the inside is plainly visible, whereas the cocoon of this insect is solid and thick, and is made of most beautiful continuous silk, which looks marketable. I had a large cluster of them sent to me from the Karen Hills by Mr. Ezechiel, and have some of the moths they produced still in my collection.

Rangoon, July, 1888; Karen Hills. In coll. Swinhoe.

I have this insect also from the Naga Hills, and from Assam.

COSSIDÆ.

193. *Zeuzera oblita*, n. sp. (Pl. VI., fig. 9).

♀. White, slightly tinged with pinkish. Thorax with three black spots on each side. Abdomen with three rows of black spots, one down the centre and one down each side. Fore wing with black spots on the costa, outer and hinder margins, and with many spots and short latitudinal streaks on the wing, a cluster of them about the middle of the cell, very few in the space beyond the cell. Hind wings with spots on the outer margin and four or five spots together in the interno-median area. Below same as above; fore and middle legs with black tibiæ and tarsi; hind legs with black tarsi. Expanse of wings, $1\frac{6}{10}$ in.

Rangoon, July, 1885. In coll. Swinhoe.

Allied to *Z. indica*, Boisd.; markings on fore wings somewhat similarly disposed, is very minute in comparison, and the hind wing and thorax are altogether differently marked.

194. *Arbela* ? *dea*, n. sp. (Pl. VI., fig. 7).

Antennæ pinkish grey. Head white. Body and wings above bright dark olive-brown. Thorax with some white marks. Abdomen whitish at the base. Fore wings with some indistinct black marks on the costa and some in the middle of the wing, and some on its pale pinkish fringe. Hind wings paler at the anal border. Underside: Face and body white; legs white, striped with brown above; wings same as above, slightly paler; costa of fore wings marked with pale pinkish grey; anal tuft same colour as the wings, enormously long and thick, cylindrical, more than two-thirds the length of the abdomen. Expanse of wings, $\frac{9}{10}$ in.

Rangoon, May, 1886. In coll. Swinhoe.

A very curious little insect; allied to nothing I know of. Undoubtedly of the family *Cossidæ*, of an undescribed genus near *Arbela*, which I leave to be described when more specimens are forthcoming.

195. *Phragmatæcia minor*.

Phragmatæcia minor, Moore, Deser. Ind. Lep. Atk., i., p. 87 (1879).

Bhamo. In coll. Swinhoe.

HEPIALIDÆ.

196. *Hepialus tavoyanus*.

Hepialus tavoyanus, Moore, Journ. As. Soc. Beng. (55), 2, i., p. 98 (1886).

Tavoy. In I. M., Calcutta.

EXPLANATION OF PLATE VI.

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- FIG. 1. *Melittia notabilis*, n. sp., p. 168.
2. ,, *pellecta*, n. sp., p. 169.
3. ,, *volatilis*, n. sp., p. 170.
4. ,, *congruens*, n. sp., p. 169.
5. *Pramila minuta*, n. sp., p. 171.
6. *Syntomis volans*, n. sp., p. 173.
7. *Arbela dea* ♂, n. sp., p. 199.
8. *Proneca fola*, n. sp., p. 194.
9. *Zeuzera oblita* ♀, n. sp., p. 198.
10. *Lenodora semihyalina* ♂, n. sp., p. 196.
11. *Cania minutissima*, n. sp., p. 195.
12. *Tinolius zingha*, n. sp., p. 185.
13. *Miresa fumifera*, n. sp., p. 195.
14. *Parasa mirza*, n. sp., p. 192.
15. *Hyperaschra annulata*, n. sp., p. 189.
16. *Lenodora semihyalina* ♀, n. sp., p. 196.
17. *Arsiloncha roseana*, n. sp.
18. *Gastropacha modulata*, n. sp., p. 197.

